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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	10/700,276	Confirmation No.: To be assigned
Applicant:	Liotta *et al.*	
Filed:	November 3, 2003	
TC/A.AU.:	To be assigned	
Examiner:	To be assigned	
Docket No.:	18085.105094 EMU 108 DIV3 CON	
Customer No.:	20786	
Title:	Antiviral Activity and Resolution of 2-Hydroxymethyl-5-(5-Fluorocytosin-1-yl)-1,3-Oxathiolane	

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

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Respectfully submitted,

Madeline I. Johnston
Reg. No. 36,174

Date: April 30, 2004
King & Spalding, LLP
191 Peachtree Street, N.E., Atlanta, GA 30303
Office: (404)572-4600/ Fax: 404-572-5145

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Sheet	1	of	7

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Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	**18085.105094 EMU 108 DIV3 CON**

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U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. [1]	U.S. Patent Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pgs, Clmns, Lns, Where Relevant Passages/Relevant Figs Appear
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Attorney Docket Number	**18085.105094 EMU 108 DIV3 CON**

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	BA	AU	7300491	A1	Liotta et al.	08-21-1991		
	BB	AU	665187		Emory University	12-21-1995		
	BC	AU	630913		Biochem Pharma Inc.	11-12-1992		
	BD	EP	0 217 580		Wellcome Foundation Ltd	04-08-1987		
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Sheet 3 of 7

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	CA	WO	92/14743	A2	Emory University	09-03-1992		
	CB	WO	92/15308		Wellcome Foundation Ltd	09-17-1992		
	CC	WO	92/15309		Wellcome Foundation Ltd	09-17-1992		
	CD	WO	92/18517		Yale U.; U. Georgia R. F.	10-29-1992		
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	CI	WO	95/29174	A1	Glaxo Group Ltd	11-02-1995		
	CJ	WO	00/09494	A1	Triangle Pharm.; Emory Univ.	02-24-2000		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T [6]
	CK	ANNUNZIATA, R., *et al.*, "Diastereoselective addition of a silylketene acetal to chiral α-thioaldehydes," *Tetrahedron Letters*, 1990:6733 (1990).	
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	EA	FURMAN, *et al.*, *"The* Anti-Hepatitis B Virus Activities, Cytotoxicities, and Anabolic Profiles of the (-) and (+) Enantiomers *of cis*-5-Fluoro-l-[2-(Hydromethyl)-l,3-Oxthiolane-5-yl]Cytosine," *Antimicrobial Agents and Chemotherapy,* 36(12):2686-2692 (1992)	
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	EH	KRENITSKY, T.A., *et al.*, "3'-Amino-2',3'-Dideoxyribonucleosides of Some Pyrimidines: Synthesis and Biological Activities," *J. Med. Chem.*, Vol. 26 (1983)	
	EI	LIN, *et al.*, "Potent and Selective In Vitro Activity of 3'-Deoxythmindine-2-Ene-(3'-Deoxy-2',3'-Didehydrothymidine) Against Human Immunodeficiency Virus," *Biochem. Pharm.*, 36(17):2713-2718 (1987)	
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	EM	MITSUYA, H., *et al.*, "Molecular Targets for AIDS Therapy," *Science,* Vol. 249, pp. 1533-1544 (1990)	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Sheet	6	of	7

Complete if Known	
Application Number	**10/700,276**
Filing Date	**November 3, 2003**
First Named Inventor	**Liotta *et al.***
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	**18085.105094 EMU 108 DIV3 CON**

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[6]
	FA	NICOLAU, K.C., *et al.*, "Stereoselective 1,2-migrations in carbohydrates. Stereocontrolled synthesis of α- and β-2-deoxyglycosides," *J. Amer. Chem. Soc.* 108(9):2466-2469 (1986).	
	FB	NORBECK, D., *et al.*, "A New 2',3'-Dideoxynucleoside Prototype with In Vitro Activity Against HIV," *Tetrahedron Lett.*, 30(46):6263-6266 (1989)	
	FC	OHNO, *et al.*, "Synthetic Studies on Biologically Active Natural Products by a Chemicoenzymatic Approach," *Tet. Letters*, 40:145-152 (1984)	
	FD	OKABE, M., *et al.*, "Synthesis of the Dideoxynucleosides ddC and CNT from Glutamic Acid, Ribonolactone, and Pyrimidine Bases," *J. Org. Chem.*, 53(20):4780-4786 (1988)	
	FE	PAFF, *et al.*, "Intracellular Metabolism of (-)- and *(+)-cis*-5-Fluoro- l-[2-(Hydroxymethyl)- 1,3-Oxathiolan-5-yl]Cytosine in HepG2 Derivative 2.2.15 (Subclone P5A) Cells," *Antimicrobial Agents and Chemotherapy*, 1230-1238 (1994)	
	FF	PIRKLE *et al.*, "Chiral Stationary Phases for the Direct LC Separation of Enantiomers," *Advances in Chromatography*, Giddings, J.C., *et al.*, eds.: Marcel Dekker: New York, 1987; Vol. 27, Chap. 3, pp. 73-127	
	FG	RICHMAN, D. D., *et al.*, *"The* Toxicity of Azidothymidine (AZT) in the Treatment of Patients with AIDS and AIDS-Related Complex," *N. Eng. J. Med.*, 317(4): 192-197 (1987)	
	FH	ROBERTS, *et al.*, "Enzymic Resolution of cis- and trans-4-hydroxycyclopent-2-enylmethanol..." *J. Chem.. Soc.*, Perkin Trans. 1, (10):2605-7 (1991)	
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	FK	SAUNDERS, "Non-Nucleoside Inhibitors of HIV Reverse Transctiptase: Screening Successes-Clinical Failures," *Drug Design and Discovery*, 8:255-263 (1992)	
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	FM	SCHINAZI, R.F., *et al.*, "Insights into HIV Chemotherapy," *AIDS Research and Human Retroviruses* 8(6):963-990 (1992)	
	FN	SCHINAZI, R.F., *et al.*, "Pharmacokinetics and Metabolism of Racemic 2',3'-Dideoxy-5-Fluoro 3'-Thiacytidine in Rhesus Monkeys," *Antimicrobial Agents and Chemotherapy* 36(11):2432-2438 (1992)	
	FO	SCHINAZI, R.F., *et al.*, "Selective Inhibition of Human Immunodeficiency Viruses by Racemates and Enantiomers of *cis*-5-Fluoro-1-[2-(Hydroxymethyl)-1,3-Oxathiolan-5-yl]Cytosine," *Antimicrobial Agents and Chemotherapy* 36(11):2423-2431 (1992)	

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				First Named Inventor	Liotta *et al.*
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				Examiner Name	Unassigned
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	GA	SCHINAZI, R.F., *et al.*, "Substrate Specificity of *Escherichia Coli* Thymidine Phosphorylase for Pyrimidine Nucleoside with an Anti-Human Immunodeficiency Virus Activity," *Biochemical Pharmacology* 44(2): 199-204 (1992)	
	GB	SECRIST, *et al.*, "Resolution of Racemic Carbocyclic Analogues of Purine Nucleosides Through the Action of Adenosine Deaminase Antiviral Activity of the Carbocyclic 2'-Deoxyguanosine Enantiomers," *J. Med. Chem.*, Vol. 30, pp. 746-749 (1987)	
	GC	SHEWACH, *et al.*, "Affinity of the antiviral enantiomers of oxathiolane cytosine nucieosides for human 2'-deoxycytidine kinase," *Biochem. Pharmacol.*, 45(7): 1540-1543 (1993)	
	GD	SOUDEYNS, H., *et al.*, "Anti-Human Immunodeficiency Virus Type 1 Activity and In Vitro Toxicity of 2'-Deoxy-3'-Thiacytidine (BCH- 189), a Noval Heterocyclic Nucleoside Analog," *Antimicrobial Agents and Chemotherapy,* 35(7):1386-1390 (1991).	
	GE	STERZYCKI, R.Z., *et al.*, "Synthesis and anti-HIV activity of several 2'-fluoro-containing pyrimidine nucleosides," *J. Med. Chem.*, 33(8):2150-2157 (1990)	
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	GJ	WILSON, *et al.*, "The 5'-Triphosphates of the (1) and (+) Enantiomers *of cis*-5-Fluoro-l-[2-(Hydroxymethyl)-1,3-Oxathiolane-5-yl]Cytosine Equally Inhibit Human Immunodeficiency Virus Type 1 Reverse Transcriptase," *Antimicrob. Agents and Chemother.*, 37(8): 1720-1722 (1993).	
	GK	WILSON, L.J., *et al.*, "A General Method for Controlling Glycosylation Stereochemistry in the Synthesis of 2'-Deoxyribose Nucleosides," *Tetrahedron Lett.*, 31(13): 1815-1818 (1990).	
	GL	WILSON, L.J., *et al., "The* Synthesis and Anti-HIV Activity of Pyrimidine Dioxolanyl Nucleosides," *Bioorganic & Medicinal Chemistry Letters,* 3(2):169-174 (1993).	
	GM	WINSLOW, *et al., "In vitro* susceptibility of clinical isolates of HIV-1 to XM323, a non peptidyl HIV protease inhibitor," *AIDS,* 8:753-756 (1994).	
	GN	ZHU, Zhou, *et al.*, "Cellular Metabolism of 3'-Azido-2',3'-Dideoxyuridine with Formation of 5'-O-Diphophoshexase Derivatives by Previously Unrecognized Metabolic Pathways of 2'-Deoxyuridine Analogs," *Molecular Pharmacology,* 1990:929-938 (1990).	

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